SUBSTITUTE FORM PTO-1390	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 06975-029001

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371**

U.S. APPLICATION NO. (IF KNOWN)

09/582261

INTERNATIONAL APPLICATION NO. PCT/US98/27217	INTERNATIONAL FILING DATE December 22, 1998	PRIORITY DATE CLAIMED December 24, 1997

TITLE OF INVENTION
LOCALIZATION OF CLIENTS AND SERVERS

APPLICANT(S) FOR DO/EO/US
William KENNEY

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.

2. ☐ This is a SECOND or SUBQUENT submission of items concerning a filing under 35 U.S.C. 371.

JUN 2 3 2000

3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).

4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).

6. ☐ A translation of the International Application (35 U.S.C. 371(c)(2)).

7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☐ have not been made and will not be made.

8. ☐ A translation of amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).

10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other documents or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. ☐ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.

14. ☐ A substitute specification.

15. ☐ A change of power of attorney and/or address letter.

16. ☒ Other items or information:
    ☒ Published International Application WO 99/34305
    ☒ Written Opinion (Form PCT/IPEA/408) and Response to Written Opinion
    ☒ Notification of Transmittal of the IPER (Forms PCT/IPEA/416 and PCT/IPEA/409)
    ☒ Form PCT/IB/308
    ☒ Form PCT/IB/332
    ☒ International Search Report - Form PCT/ISA/220

U.S. APPLICATION NO. (IF KNOWN) 09/582261	INTERNATIONAL APPLICATION NO. PCT/US98/27217	ATTORNEY'S DOCKET NUMBER 06975-029001

17. ☒ The following fees are submitted:	CALCULATIONS	PTO USE ONLY
Basic National Fee (37 CFR 1.492(a)(1)-(5)):		
Search report has been prepared by the EPO or JPO.............................. $840	$840.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) .. $670		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).... $690	$0.00	
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO $970	$0.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2) to (4) $96	$0.00	
ENTER APPROPRIATE BASIC FEE AMOUNT	$840.00	

Surcharge of $130 for furnishing the oath or declaration later than ☐ 20 ☐ 30 mos. from the earliest claimed priority date (37 CFR 1.492(e)).				$0.00	
Claims	Number Filed	Number Extra	Rate		
Total Claims	21 - 20	1	x $18	$858.00	
Independent Claims	3 - 3	0	x $78	$0.00	
Multiple Dependent Claims(s) (if applicable)			+ $260	$0.00	
TOTAL OF ABOVE CALCULATIONS				$18.00	
Reduction by ½ for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28.)				$0.00	
SUBTOTAL				$858.00	
Processing fee of $130 for furnishing the English Translation later than ☐ 20 ☐ 30 mos. from the earliest claimed priority date (37 CFR 1.492(f))				$0.00	
TOTAL NATIONAL FEE				$858.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31).				$0.00	
TOTAL FEES ENCLOSED				$858.00	
				Amount to be refunded	
				Charged	

a. ☒ A check in the amount of $858.00 to cover the above fees is enclosed.
b. ☐ Please charge my Deposit Account No. 06-1050 in the amount of $0.00 to cover the above fees. A duplicate copy of this sheet is enclosed.
c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1050. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

W. Karl Renner
FISH & RICHARDSON P.C.
601 Thirteenth Street, NW
Washington, DC 20005
(202) 783-5070 *phone*
(202) 783-2331 *facsimile*

SIGNATURE   6/23/2000

NAME   W. Karl Renner

REGISTRATION NUMBER   41,265

40030638.doc

SUBSTITUTE FORM PTO-1390	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 06975-029001
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO. (IF KNOWN) **09/582261**

INTERNATIONAL APPLICATION NO. PCT/US98/27217	INTERNATIONAL FILING DATE December 22, 1998	PRIORITY DATE CLAIMED December 24, 1997

TITLE OF INVENTION
LOCALIZATION OF CLIENTS AND SERVERS

APPLICANT(S) FOR DO/EO/US
William KENNEY

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.

2. ☐ This is a SECOND or SUBQUENT submission of items concerning a filing under 35 U.S.C. 371.

3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).

4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
    a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
    b. ☒ has been transmitted by the International Bureau.
    c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).

6. ☐ A translation of the International Application (35 U.S.C. 371(c)(2)).

7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
    a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
    b. ☐ have been transmitted by the International Bureau.
    c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
    d. ☐ have not been made and will not be made.

8. ☐ A translation of amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).

10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other documents or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. ☐ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.

14. ☐ A substitute specification.

15. ☐ A change of power of attorney and/or address letter.

16. ☒ Other items or information:
    ☒ Published International Application WO 99/34305
    ☒ Written Opinion (Form PCT/IPEA/408) and Response to Written Opinion
    ☒ Notification of Transmittal of the IPER (Forms PCT/IPEA/416 and PCT/IPEA/409)
    ☒ Form PCT/IB/308
    ☒ Form PCT/IB/332
    ☒ International Search Report - Form PCT/ISA/220

U.S. APPLICATION NO. (IF KNOWN): 09/582261	INTERNATIONAL APPLICATION NO. PCT/US98/27217	ATTORNEY'S DOCKET NUMBER 06975-029001	

17. ☒ The following fees are submitted:	CALCULATIONS	PTO USE ONLY
Basic National Fee (37 CFR 1.492(a)(1)-(5)):		
Search report has been prepared by the EPO or JPO $840	$840.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) .. $670		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).... $690	$0.00	
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO $970	$0.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2) to (4) $96	$0.00	
ENTER APPROPRIATE BASIC FEE AMOUNT	$840.00	

Surcharge of $130 for furnishing the oath or declaration later than ☐ 20 ☐ 30 mos. from the earliest claimed priority date (37 CFR 1.492(e)).			$0.00	

Claims	Number Filed	Number Extra	Rate		
Total Claims	21 - 20	1	x $18	$858.00	
Independent Claims	3 - 3	0	x $78	$0.00	
Multiple Dependent Claims(s) (if applicable)			+ $260	$0.00	
TOTAL OF ABOVE CALCULATIONS				$18.00	
Reduction by ½ for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28.)				$0.00	
SUBTOTAL				$858.00	
Processing fee of $130 for furnishing the English Translation later than ☐ 20 ☐ 30 mos. from the earliest claimed priority date (37 CFR 1.492(f))				$0.00	
TOTAL NATIONAL FEE				$858.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31).				$0.00	
TOTAL FEES ENCLOSED				$858.00	
				Amount to be refunded	
				Charged	

a. ☒ A check in the amount of $858.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 06-1050 in the amount of $0.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1050. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

W. Karl Renner
FISH & RICHARDSON P.C.
601 Thirteenth Street, NW
Washington, DC 20005
(202) 783-5070 *phone*
(202) 783-2331 *facsimile*

_____ 6/23/2000
SIGNATURE

W. Karl Renner
NAME

41,265
REGISTRATION NUMBER

40030638.doc

Attorney Docket No.: 06975/029WO1

DATA LOCALIZATION

BACKGROUND

5   Data service providers can use centralized host computer systems to provide customized information service data to users at remote client computers. The information service data may be localized. That is, the host computer may send data to a user at a remote client computer that is specific to a particular geographic or logical location. For example, a host computer can provide localized weather service data to users at client computers

10   throughout a country. To localize the weather data, the host system can select different weather data depending on the geographic location of the client computer. Data localization techniques may require that a user identify the location of interest. For example, a user may be prompted to enter address, phone number, zip code or other location identification data needed by a host system to localize data for the particular user.

15   ## SUMMARY

Localization of information service data provided by an information service host computer system to users at remote client computer systems can be facilitated by automatically determining a geographic or logical location associated with the client computer system. The automatic determination of a location can be achieved using data

20   identifying the terminal server through which a client computer accesses the host system or computer network.

In general, in one aspect, the invention features a data transfer method. The method includes receiving terminal server identification data at a host system from a terminal server, querying a database to obtain localized information service data associated with the terminal

25   server identification data, and sending the localized information service data from the host system to the terminal server.

In general, in another aspect, the invention features a computer host system. The host system includes a database system, a network interface, and a processor. The database system

includes records to associate terminal server identification data with information service data. The interface couples the host system to a communications link over which the host system can exchange data with a terminal server. The processor is coupled to the interface and to the database and is configured to receive terminal server identification data from the data

5   interface, to query the database for localized information service data associated with the terminal server identification data, and to send the localized information service data obtained by the query to the data interface for transmission to the terminal server.

In general, in another aspect, the invention features a computer program residing on a computer-readable medium. The program includes instructions for causing a computer to

10   receive terminal server identification data from a terminal server, to query a database to obtain localized information service data associated with the terminal server identification data, and to send the localized information service data from the host system to the terminal server.

Implementations may include one or more of the following features. A host system

15   database may include records associating terminal server identification data with location data and/or directly associating the identification data with localized information service data. Data connections may be established between a client computer and the terminal server and between the terminal server and a host computer system. The host system may include packet processing circuitry to receive data packets from the terminal server, and to extract terminal

20   server identification data from a header region of the data packet. For example, the host may extract the terminal server's network address from a data packet and is it as the terminal server identifier. The host may query a database based on the terminal server identification data to determine localized information to be sent to the client computer. Localization of particular data services may be done in response to a request originating at a client computer

25   identifying a specific information service. In such a case, the host may obtain localized information service data using a database query based on both the terminal server identification data and the specified information service.

The details of one or more embodiments of the invention are set forth in the accompanying drawings and the description below. Implementations may provide advantages

30   such as facilitating access to localized data without requiring user location input. Other features, objects, and advantages of the invention will be apparent from the description and drawings, and from the claims.

DESCRIPTION OF DRAWINGS

FIG. 1 is a computer hardware diagram.

FIG. 2 is a computer network diagram.

FIG. 3 is a flowchart.

DETAILED DESCRIPTION

Fig. 1 depicts physical resources of a computer system 100. The computer 100 has a central processor 101 connected to a processor host bus 102 over which it provides data, address and control signals. The processors 101 may be any conventional general purpose single- or multi-chip microprocessor such as a Pentium ® processor, a Pentium® Pro processor, a Pentium II® processor, a MIPS® processor, a Power PC® processor or an ALPHA® processor. In addition, the processor 101 may be any conventional special purpose microprocessor such as a digital signal processor or a graphics processor. The microprocessor 101 has conventional address, data, and control lines coupling it to a processor host bus 102.

The computer 100 includes a system controller 103 having an integrated RAM memory controller 104. The system controller 103 is connected to the host bus 102 and provides an interface to random access memory 105. The system controller 103 also provides host bus to peripheral bus bridging functions. The controller 103 thereby permits signals on the processor host bus 102 to be compatibly exchanged with signals on a primary peripheral bus 110. The peripheral bus 110 may be, for example, a Peripheral Component Interconnect (PCl) bus, an Industry Standard Architecture (ISA) bus, or a Micro-Channel bus. Additionally, the controller 103 can provide data buffering and data transfer rate matching between the host bus 102 and peripheral bus 110. The controller 103 thereby allows, for example, a processor 101 having a 64-bit 66 MHz interface and a 533 Mbytes/second data transfer rate to interface to a PCl bus 110 having a data path differing in data path bit width, clock speed, or data transfer rate.

Accessory devices including, for example, a video display controller 112 and network controller 114 can be coupled to the peripheral bus 110. The network controller 114 may be a modem, an Ethernet networking card, a cable modem, or other network access device. The system 100 may also include a secondary peripheral bus 120 coupled to the primary peripheral bus 110 through a bridge controller 111. The secondary peripheral bus 120 can be

included in the system 100 to provide additional peripheral device connection points or to connect peripheral devices that are not compatible with the primary peripheral bus 110. For example, in the system 100, the secondary bus 120 may be an ISA bus and the primary bus 110 may be a PC1 bus. Such a configuration allows ISA devices to be coupled to the ISA bus

5 120 and PC1 devices to be coupled to the PC1 bus 110. The bridge controller 111 can also include a hard disk drive control interface to couple a hard disk 113 to the peripheral bus 110. The computer 100 also includes non-volatile ROM memory 122 to store basic computer software routines. ROM 122 may include alterable memory, such as EEPROM (Electronically Erasable Programmable Read Only Memory), to store configuration data. For

10 example, EEPROM memory may be used to store hard disk 113 geometry and configuration data. BIOS routines 123 are included in ROM 122 and provide basic computer initialization, systems testing, and input/output (I/O)services. For example, BIOS routines 123 may be executed by the processor 101 to process interrupts that occur when the bridge 111 attempts to transfer data from the ISA bus 120 to the host bus 102 via the bridge 111, peripheral bus

15 110, and system controller 103. The BIOS 123 also includes routines that allow an operating system to be "booted" from the disk 113 or from a server computer using a local area network connection provided by the network adapter 114. The operating system boot operation can occur after the computer 100 is turned on and power-on self-test (POST) routines stored in the BIOS 123 complete execution, or when a reset switch is depressed, or

20 following a software-initiated system reset or a software fault. During the boot process, the processor 101 executes BIOS 123 software to access the disk controller 111 or network controller 114 and thereby obtain a high-level operating system. The high-level operating system is, for example, the Microsoft Disk Operating System (DOS) ™, Windows 95™, Windows NT™, a UNIX operating system, the Apple MacOS ™ operating system, or other

25 operating system.

An operating system may be fully loaded in the RAM memory 105 or may include portions in RAM memory 105, disk drive storage 113, or storage at a network location. For example, the Microsoft Windows 95™ operating system includes some functionality that remains in memory 105 during the use of Windows 95™ and other functionality that is

30 periodically loaded into RAM memory 105 on an as-needed basis from, for example, the disk 113. An operating system, such as Windows 95™ or Windows NT ™ provides functionality to control computer peripherals such as devices 112-114, 12 1, and 124, and to execute user

software, scientific software, internet access software, word processing software, and many other types of software. User applications may access computer system peripherals 112-114, 121, and 124 through an application programming interface provided by the operating system and/or may directly interact with underlying computer system 100 hardware.

5   A collection of computers 100 can serve as components of a computer network. As shown in Fig. 2, a computer network 200 can include a host computer system 210 and client computers 231-236. The client computers 231-236 can communicate with the host 210 to obtain data stored at the host 210 in databases 214-215. The client computer 231-236 may interact with the host computer 210 as if the host was a single entity in the network 200.

10   However, the host 210 may include multiple processing and database sub-systems that can be geographically dispersed throughout the network 200. For example, a host 210 may include a tightly coupled cluster 21 I-213 of computers 100 (Fig. 1) at a first location that access database systems 2 14-2 15 at remote locations. Each database system 2 14-2 15 may include additional processing components.

15   Client computers 231-236 can communicate with the host system 210 over, for example, a combination of public switched telephone network dial-up connections and packet network interconnections. For example, client computers 23 1-233 may each include a modem coupled to voiceband telephone line 241-243. To communicate with the host 210, the client computers 231-233 establish a data connection with a local terminal server 225 by dialing a

20   telephone number assigned to the local terminal server 225. A local terminal server 225 may have both dial-up and packet network interfaces allowing the server 225 to receive data from client computers 23 1-233, segment the received data into data packet payload segments, add overhead information to the payload segments, and send the resultant data packets over a link 221 to a packet data network 220 for delivery to the host system 210. Terminal servers 225

25   and 226 may also be referred to as a network service provider's point-of-presence (POP).

        The overhead information added to the payload segments includes a packet header. A packet header includes a destination address assigned to the host system 210 and a source address assigned to the local terminal server 225. Other overhead information may include information associating the data packet with a specific client 231-233. Similarly, the host

30   system 210 may send data to a client 231-233 by segmenting the data internet packet payload segments, and adding overhead information to send the data packet to a client 231-234 at the terminal server 225. Client computers 234-236 may similarly exchange data with the host 210 over communications links 244-246 to the terminal server 226.

software, scientific software, internet access software, word processing software, and many other types of software. User applications may access computer system peripherals 112-114, 121, and 124 through an application programming interface provided by the operating system and/or may directly interact with underlying computer system 100 hardware.

5   A collection of computers 100 can serve as components of a computer network. As shown in Fig. 2, a computer network 200 can include a host computer system 210 and client computers 231-236. The client computers 231-236 can communicate with the host 210 to obtain data stored at the host 210 in databases 214-215. The client computer 231-236 may interact with the host computer 210 as if the host was a single entity in the network 200.

10   However, the host 210 may include multiple processing and database sub-systems that can be geographically dispersed throughout the network 200. For example, a host 210 may include a tightly coupled cluster 21 I-213 of computers 100 (Fig. 1) at a first location that access database systems 2 14-2 15 at remote locations. Each database system 2 14-2 15 may include additional processing components.

15   Client computers 231-236 can communicate with the host system 210 over, for example, a combination of public switched telephone network dial-up connections and packet network interconnections. For example, client computers 23 1-233 may each include a modem coupled to voiceband telephone line 241-243. To communicate with the host 210, the client computers 231-233 establish a data connection with a local terminal server 225 by dialing a

20   telephone number assigned to the local terminal server 225. A local terminal server 225 may have both dial-up and packet network interfaces allowing the server 225 to receive data from client computers 23 1-233, segment the received data into data packet payload segments, add overhead information to the payload segments, and send the resultant data packets over a link 221 to a packet data network 220 for delivery to the host system 210. Terminal servers 225

25   and 226 may also be referred to as a network service provider's point-of-presence (POP).

The overhead information added to the payload segments includes a packet header. A packet header includes a destination address assigned to the host system 210 and a source address assigned to the local terminal server 225. Other overhead information may include information associating the data packet with a specific client 231-233. Similarly, the host

30   system 210 may send data to a client 231-233 by segmenting the data internet packet payload segments, and adding overhead information to send the data packet to a client 231-234 at the terminal server 225. Client computers 234-236 may similarly exchange data with the host 210 over communications links 244-246 to the terminal server 226.

integrated circuits).

A number of embodiments of the present invention have been described. Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the invention. For example, the terminal server is not limited to a modem bank. A terminal server may be a proxy server, network gateway, network firewall, or other network element through which client computers connect to a host system and which allow a location to be associated with a client.

WHAT IS CLAIMED IS:

1   1.   A method for data transfer between a host system (210), a database (214, 215), and a
2   terminal server (225, 226), the terminal server (225, 226) having a location, the method
3   comprising the steps of:
4   receiving at a host system (210), terminal server identification from a terminal server (225,
5   226);
6   querying a database (214, 215) to obtain service data associated with the location based on
7   the terminal server identification; and
8   automatically sending the location specific service data from the host system (210) to the
9   terminal server (225, 226).

1   2.   The method of claim 1 wherein the database (214, 215) includes a first record that
2   associates the terminal server identification with the location, and the step of querying the
3   database (214, 215) includes a step of determining the location based on the terminal server
4   identification data from the first record.

1   3.   The method of claim 2 wherein the database (214, 215) further includes a record
2   that associates the location with service data that is specific to the location, and the step of
3   querying the database (214, 215) further comprises the step of determining the location
4   specific service data based on the determined location.

1   4.   The method of claim 1 further comprising the steps of:
2   establishing a data connection between the terminal server (225, 226) and a client
3   computer;
4   receiving the location specific service data at the terminal server (225, 226); and
5   forwarding the location specific service data from the terminal server (225, 226) to the
6   client computer.

1   5.   The method of claim 4 wherein the step of establishing a data connection is carried
2   out prior to the step of receiving the terminal server identification.

1
2   6.   The method of claim 4 wherein the step of establishing a data connection further

3 comprises the step of receiving a dial-up modem connection from a client computer.

1

2 7. The method of claim 1 wherein the terminal server identification comprises a

3 network address associated with the terminal server (225, 226).

1 8. The method of claim 7 wherein the step of receiving the terminal server

2 identification further comprises the step of receiving a data packet from the terminal server (225,

3 226), the data packet including the terminal server (225, 226) network address.

1 9. The method of claim 8 wherein the data packet includes request data received at

2 the terminal server (225, 226) from the client computer, the request data identifying an

3 information   service.

1 10. The method of claim 9 wherein the step of querying the database (214, 215)

2 further comprises querying based on the terminal server identification and the request data; and

3 the location specific service data obtained by the query of the database (214, 215) is associated

4 with both the terminal server identification data and with the service identified by the request

5 data.

1 11. A host system (210) comprising:

2 a database (214, 215) including a record associating a terminal server identification

3 with service data specific to a location;

4 an interface to exchange data with a terminal server (225, 226) situated at a location via

5 a communications link; and

6 a processor configured to receive the terminal server identification from the data

7 interface, to query the database (214, 215) for location specific service data associated with the

8 terminal server identification, and to send the location specific service data obtained by the

9 query to the datainterface for transmission to the terminal server (225, 226).

1 12. The host system (210) of claim 11 wherein:

2 the terminal server identification comprises a network address associated with the

3 terminal server (225, 226); and

4   the interface includes packet processing circuitry to receive a data packet from the

5   terminal server (225, 226) and extract the terminal server identification from a header region of

6   the data packet.

1   13.   The host system (210) of claim 12 wherein the network address comprises an

2   internet protocol address.

1   14.   The host system (210) of claim 11 wherein the database (214, 215) includes a

2   disk storage medium comprising a plurality of records associating terminal server

3   identifications with locations and a plurality of records associating locations with service data.

1   15.   The server of claim 14 further comprising a software storage media coupled to the

2   processor, the media storing instructions to configure the processor to query the database (214,

3   215), instructions to retrieve locations associated with terminal server identifications and

4   instructions to query the database (214, 215) to retrieve service data associated with locations.

1   16.   A computer program residing on a computer-readable medium, comprising

2   instructions for causing a computer to:

3   receive terminal server identification from a terminal server (225, 226);

4   query a database (214, 215) to obtain location specific service data associated with the

5   terminal server identification; and

6   send the location specific service data to the terminal server (225, 226).

1   17.   The program apparatus of claim 16 wherein the instructions to query the database

2   (214, 215) comprise instructions to query the database (214, 215) to determine a location based

3   on the received terminal server identification.

4

1   18.   The program apparatus of claim 16 wherein the terminal server identification
2   comprises a network address associated with the terminal server (225, 226).

1   19.   The program apparatus of claim 16 wherein the instructions to receive the
2   terminal server identification comprises instructions to receive a data packet from the terminal
3   server (225, 226), the data packet including the terminal server network address.

1   20.   The program apparatus of claim 19 wherein the data packet further comprises
2   request data received at the terminal server (225, 226) from a client computer, the request data
3   identifying a service.

1   21.   The program apparatus of claim 20 wherein:
2   the instructions to query the database (214, 215) comprise instructions to query the
3   database (214, 215) based on the terminal server identification and the request data; and the
4   location specific service data obtained by the query is associated with both the terminal server
5   identification and with the service identified by the request data.
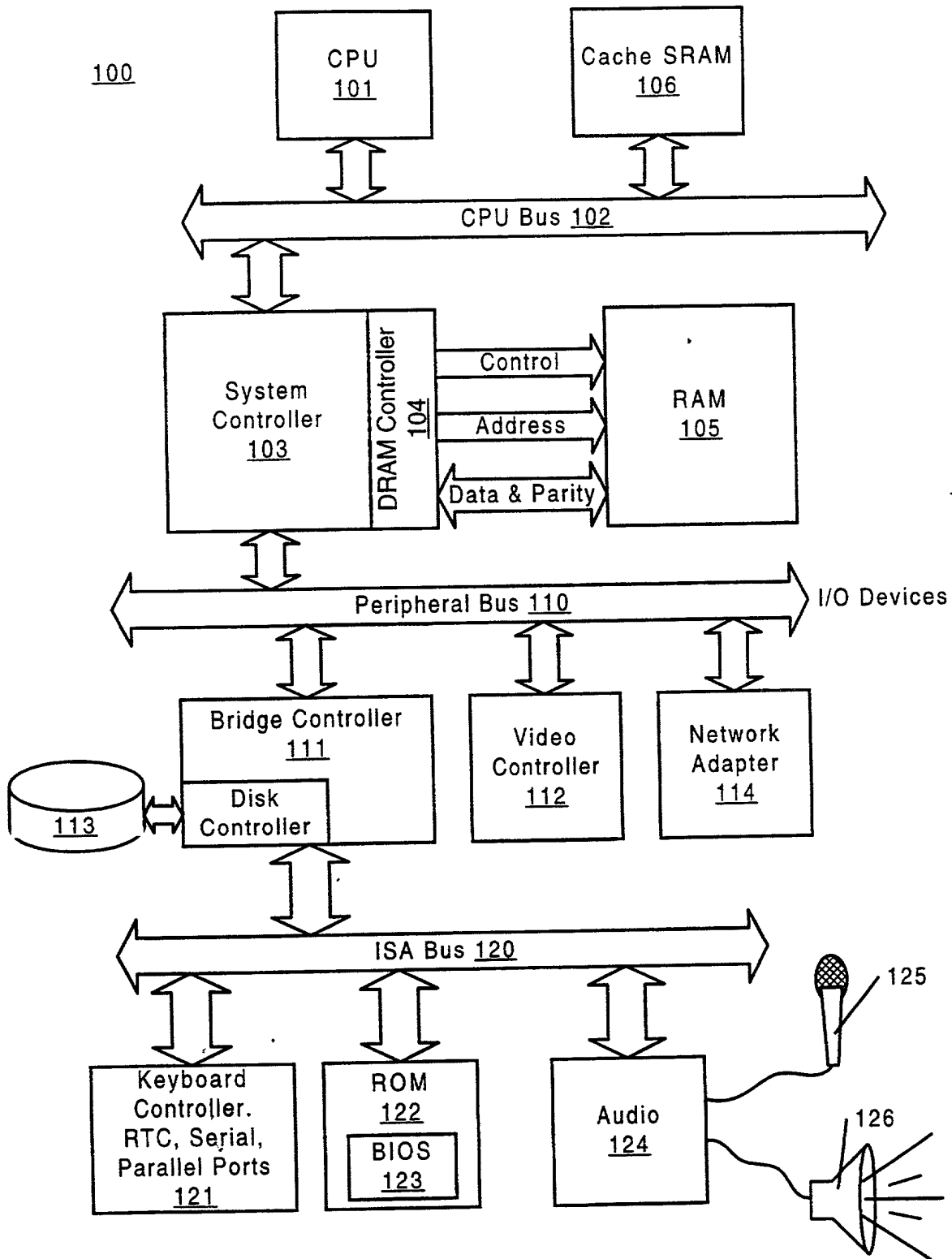
Fig. 1 (Prior Art)

200

Host
210

211

212

Response

Query

Database
214

213

Response

Query

Database
215

223

220

221

222

225

226

242

241 243

245

244 246

231   232   233

234   235   236

Fig. 2

3 / 3

```
┌─────────────────────┐
│  Client connects to │
│   Terminal Server   │
│        301          │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│   Terminal Server   │
│  Sends Client Data  │
│    and Terminal     │
│  Server ID to Host  │
│        303          │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│     Host Maps       │
│  Terminal Server ID │
│  to Localized Data  │
│        304          │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│     Host Sends      │
│  Localized Data To  │
│  Terminal Server /  │
│       Client        │
│        305          │
└─────────────────────┘
```
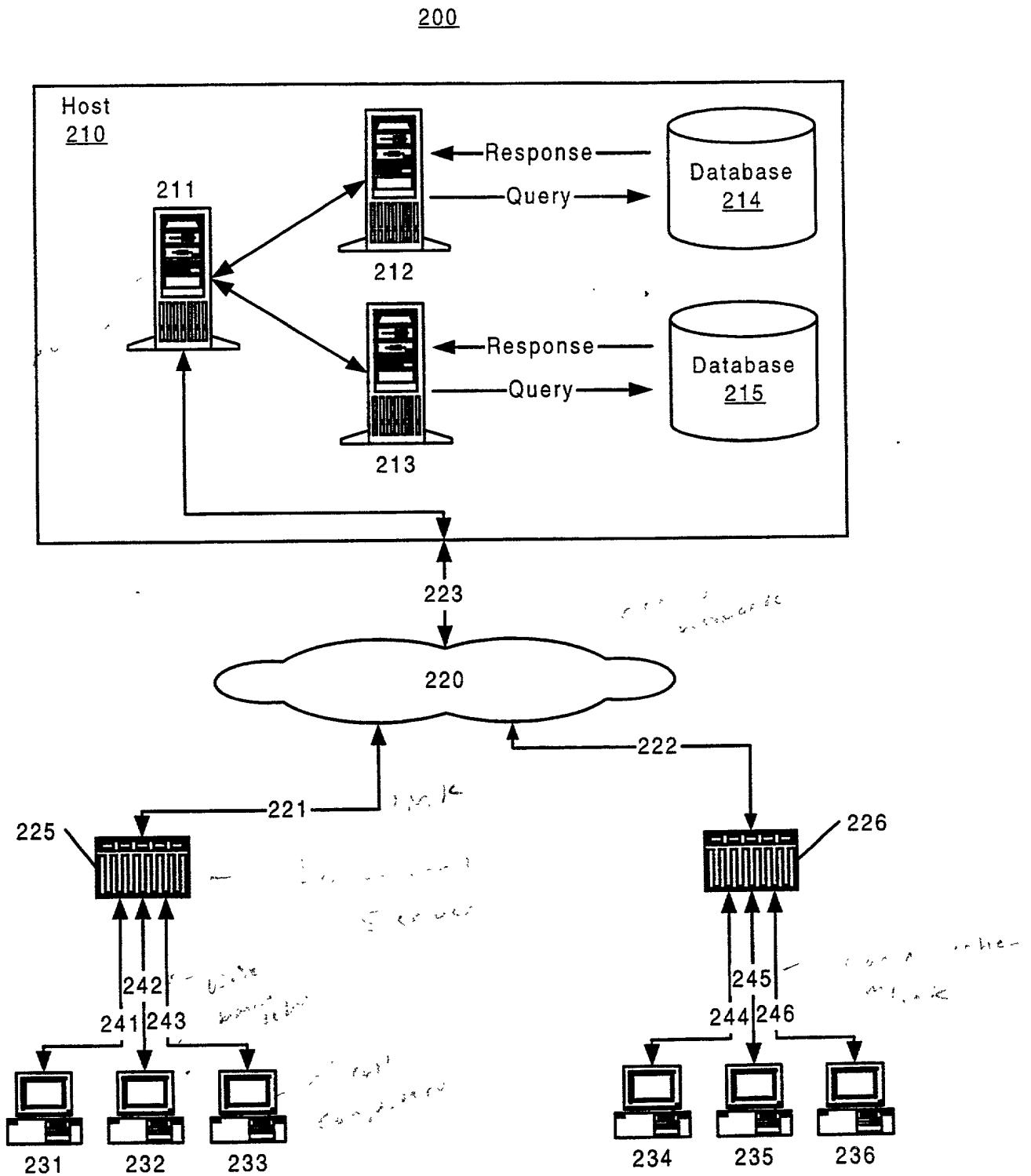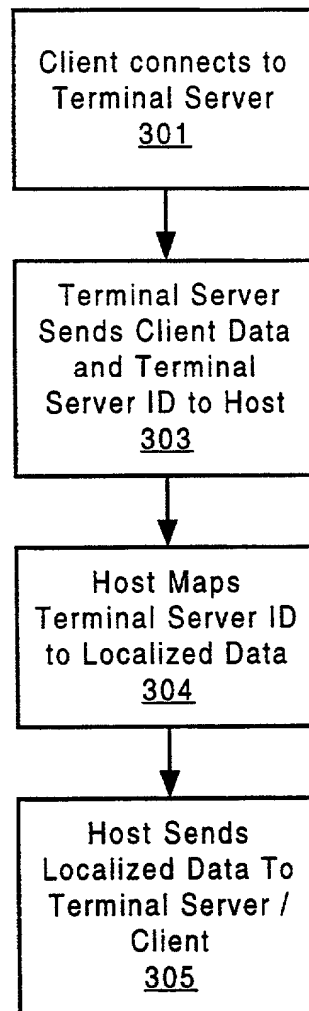
Fig. 3

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled LOCALIZATION OF CLIENTS AND SERVERS, the specification of which:

[]   is attached hereto.

[X]   was filed on _June 23, 2000_ as Application Serial No. _09/582,261_ and was amended on _____, and

[X]   was described and claimed in PCT International Application No. _PCT/US98/27217_ filed on _December 22, 1998_ and as amended under PCT Article 19 on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim the benefit under Title 35, United States Code, §119(e)(1) of any United States provisional application(s) listed below:

U.S. Serial No.	Filing Date	Status
60/068,868	December 24, 1997	Pending
60/070,617	January 6, 1998	Pending

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all information I know to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S. Serial No.	Filing Date	Status

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Country	Application No.	Filing Date	Priority Claimed
PCT	PCT/US98/27217	December 22, 1998	[X]Yes [] No

Combined Declaration and Power of Attorney
Page 2 of 2 Pages

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

John F. Hayden, Reg. No. 37,640; Linda Liu Kordziel, Reg. No. 39,732; William E. Booth, Reg. No. 28,933; Ruffin B. Cordell, Reg. No. 33,487; John W. Freeman, Reg. No. 29,066; Timothy A. French, Reg. No. 30,175; G. Roger Lee, Reg. No. 28,963; Ralph A. Mittelberger, Reg. No. 33,195; John B. Pegram, Reg. No. 25,198; Rene D. Tegtmeyer, Reg. No. 33,567; Charles C. Winchester, Reg. No. 21,040; William D. Hare, Reg. No. 44,739; Diana DiBerardino, Reg. No. 45,653, Robert V. Racunas, Jr., Reg. No. 43,027; Walter K. Renner, Reg. No. 41,265; Joseph F. Key, Reg. No. 44,827; and James R. Bramson, Reg. No. 41,632.

Address all telephone calls to W. KARL RENNER at telephone number (202) 783-5070.

Address all correspondence to W. KARL RENNER at:

FISH & RICHARDSON P.C.
601 Thirteenth Street, NW
Washington, DC 20005

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor: WILLIAM KENNEY

Inventor's Signature: Date: 8-1-00

Residence Address: Weston, Virginia, USA
Citizenship: United States of America
Post Office Address: 1921 B Villa Ridge Drive
                          Weston, VA 20191

40031900.doc

Reston, VA